IN THE CLAIMS:

Please amend the claims pending in this application as follows:

1.   (Currently Amended) A method for concatenating packets to be transmitted from a first node to a second node, the method comprising the steps of:

(a) receiving packets having at least one traffic characteristic from at least one input port;

(b) concatenating *n* received packets to form a concatenated packet, wherein the concatenated packet comprises a common header, a content information part of each of the *n* received packets, and a payload of each of the *n* received packets; and

(c) transmitting the concatenated packet from the first node to the second node, wherein the *n* received packets have a common traffic characteristic and *n* is determined based on the common traffic characteristic and at least one packet characteristic, wherein the at least one packet characteristic comprising at least one of comprises a size of the common header, a size of the content information part of each of the n received packets, and one of a size of the payload of each of the n received packets[[,]] or a maximum possible payload size of the common header a received packet having the common traffic characteristic.

2.   (Previously presented) The method of claim 1, wherein the concatenated packet is transmitted through a channel in a communication network, wherein the common traffic characteristic requires a delay of less than *p* milliseconds.

3.   (Previously presented) The method of claim 2, wherein the channel has a bandwidth of *B* and *n* is determined by solving *n* from an equation of the form

$(H + nI + \sum_{i=1}^{n} P_i)/B < p/1000$, where *H* is the size of the common header, *I* is the size of

the content information part of each of the *n* received packets, and P_i is the size of the payload of the *i*th of the *n* received packets.

4.   (Previously presented) The method of claim 2, wherein the channel has a bandwidth of B and if P_{max} represents the maximum possible payload size of a received packet having the common traffic characteristic, n is determined by solving n from an equation of the form $(H + n(I + P_{max})) / B \le p / 1000$, where H is the size of the common header and I is the size of the content information part of each of the n received packets.

5.   (Previously presented) The method of claim 1, wherein the concatenated packet is transmitted through a channel in a communication network, wherein the common traffic characteristic is delay insensitive.

6.   (Currently Amended) The method of claim 5, wherein ~~the~~ a maximum packet size allowed by the communication network is M bytes and n is determined by solving n from an equation of the form $H + nI + \sum_{i=1}^{n} P_i \le M$, where H is the size of the common header, I is the size of the content information part of each of the n received packets, and P_i is the size of the payload of the ith of the n received packets.

7.   (Currently Amended) The method of claim 5, wherein ~~the~~ a maximum packet size allowed by the communication network is M bytes and if P_{max} represents the maximum possible payload size of a received packet having the common traffic characteristic, n is determined by solving n from an equation of the form $H + n(I + P_{max}) \le M$, where H is the size of the common header, and I is the size of the content information part of each of the n received packets.

8.   (Currently Amended) An apparatus for concatenating packets to be transmitted from a first node to a second node, the apparatus comprising:
(a) at least one input port for receiving packets;
(b) a traffic characteristic classifier for classifying and storing received packets of different traffic characteristics into different traffic characteristic groups in memory;

(c) a concatenated packets preparer for forming a concatenated packet from *n* received packets, wherein the concatenated packet comprises a common header, a content information part of each of the *n* received packets, and a payload of each of the *n* received packets; and

(d) at least one output port for transmitting the concatenated packet to the second node, wherein the *n* packets belong to one traffic characteristic group and *n* is determined based on the traffic characteristic of the one traffic characteristic group and at least one packet characteristic, wherein the at least one packet characteristic ~~comprising at least one of~~ comprises a size of the common header, a size of the content information part of each of the *n* received packets, and one of a size of the payload of each of the *n* received packets[[,]] or a maximum possible payload size of ~~the common header~~ a received packet having the traffic characteristic of the one traffic characteristic group.

9. (Previously presented) The apparatus of claim 8, wherein the concatenated packet is transmitted through a channel in a communication network, wherein the *n* packets belong to the one traffic characteristic group that requires a delay time of less than *p* milliseconds, wherein the common header includes *H* bytes, the content information part of each of the *n* received packets includes *I* bytes, and the payload for *i*th of the *n* received packets includes P_i bytes.

10. (Previously presented) The apparatus of claim 9, wherein the channel has a bandwidth of *B* and *n* is determined by solving *n* from an equation of the form

$$(H + nI + \sum_{i=1}^{n} P_i)/B < p/1000.$$

11. (Previously presented) The method of claim 9, wherein the channel has a bandwidth of *B* and if P_{max} represents the maximum possible payload size of a received packet having the common traffic characteristic, *n* is determined by solving *n* from an equation of the form $(H + n(I + P_{max}))/B \le p/1000$.

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12.   (Previously presented) The apparatus of claim 8, wherein the concatenated packet is transmitted through a channel in a communication network, wherein the n packets belong to the one traffic characteristic group that is delay insensitive, wherein the common header includes H bytes, the content information part of each of the n received packets includes I bytes, and the payload for ith of the n received packets includes P_i bytes.

13.   (Currently Amended) The apparatus of claim 12, wherein ~~the~~ a̲ maximum packet size allowed by the communication network is M bytes and n is determined by solving n from an equation of the form $H + nI + \sum_{i=1}^{n} P_i \leq M$.

14.   (Currently Amended) The method of claim 12, wherein ~~the~~ a̲ maximum packet size allowed by the communication network is M bytes and if P_{max} represents the maximum possible payload size of a received packet having the common traffic characteristic, n is determined by solving n from an equation of the form $H + n(I + P_{max}) \leq M$.